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Ilka Mindt, *Adjective Complementation: An Empirical Analysis of Adjectives followed by That-Clauses* (Studies in Corpus Linguistics 42). 2011. Amsterdam and Philadelphia: John Benjamins. ISBN 9789027223180. vii + 238 pp.

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Mindt's (2011) monograph presents a corpus-driven study of adjectives followed by *that*-clauses in present-day British English. Drawing on an analysis of more than 50,000 examples from the British National Corpus (BNC), she addresses a number of problems in grammatical analyses and descriptions of adjectival constructions. As briefly explained in Chapter 1, these pertain to (i) the classification of adjectives complemented by *that*-clauses, (ii) constructions with objects occurring between the verb and the adjective (e.g. *Labour made it clear that ...*), (iii) constructions with result clauses (e.g. *the answer is so obvious that ...*), (iv) the relation between the semantics of the adjective and the verb form in the *that*-clause, and (v) the omission of *that*. Crucially, the study does not impose any restrictions in terms of syntax or semantics to include or exclude cases, which is a true merit. The book consists of 9 chapters, each of which I will discuss in turn.

Chapter 1 forms an introduction to the study, and first tackles the question of why it is desirable to investigate adjectives complemented by *that*-clauses. While the literature overview is very extensive (mentioning up to 45 names on a single page), it insufficiently details the specific hiatuses these studies have left in the domain of clausal complementation, adjectival constructions, or the combination thereof. As for introducing the problems that the book focuses on, in this chapter the author does not clarify how her corpus study will address these problems, choosing to present instead a summary of the current major approaches in corpus linguistics, i.e. corpus-based and corpus-driven ones, and we learn that the book adopts the latter. The chapter concludes with a useful outline of the book, which is nicely linked to the linear structure of the pattern studied. It also highlights the systematic set-up of the book, with the chapters presenting the empirical research (Chapters 3-8) sharing the same structure.

Chapter 2 presents the methodological background to the corpus research. It discusses the corpus used (BNC), the procedure of data selection, and the aspects and criteria of linguistic analysis. Mindt initially searched instances of the 'adjective + *that*-clause' string in the BNC (excluding zero *that*), which yielded more than 40,000 hits, and found that 51 adjectives accounted for 75% of these. Subsequently, the BNC was

searched for these 51 adjectives followed by the conjunction *that* and zero *that*. In order to avoid the exclusion of relevant examples because of inconsistent tagging, the examples of adjective + *that* were searched by using two word-based strings that were independent of annotation and allowed for intervening words. All hits were checked manually to eliminate non-relevant examples. For the examples of adjective + zero *that*, however, no details on the search method are given. In line with the corpus-driven approach, Mindt took care to analyse all relevant instances according to the same linguistic aspects and criteria. Essentially, these criteria need to be extracted from the language data, and need to hold for all instances without exception. The selection of the aspects to be analysed was based on the linear make-up of instances of the ‘adjective + *that*-clause’ pattern. Mindt arrives at seven aspects, which are treated separately in Chapters 3 to 8.

Chapter 3 discusses the aspect of the subjects in the matrix clause and the *that*-clause, and their possible relation to adjectives. Examples of structures that are included in her analysis are given in (1) to (4).

- (1) We need to be *sure* that they respect us and trust us. (CEF 987, p.23)
- (2) We’re so *sure* about the reliability of our washing machine that we’ve given them a full 5-year parts guarantee. (CFS 1672, p. 23)
- (3) It’s *true* that I don’t fancy John anymore (ADG 99, p. 26)
- (4) *Glad* that the conversation had moved to a wide field, she gave a sigh of relief. (HA5 3053, p. 39)

Example (1) differs from (2) in that in (2) the adjective *sure* is preceded by the adverb *so*, and the *that*-clause “presents a result that is based on the assessment in the matrix clause” (p. 37). While (2) instantiates the “resultative” construction, (1) illustrates the “explanative” construction, as its *that*-clause “provides an explanation in relation to the matrix clause” (p. 23). Examples like (3) are classed with the explanative type, and examples like (4) are merely analysed as having ‘no subject’. Whereas traditionally resultative constructions have been treated separately from explanative ones, and the latter have been classified on the basis of their subject type (experience subjects (cf. (1)) versus anticipatory *it* (cf. (3)) (see pp. 25-38), Mindt subjects all instances to the same analysis, and makes a distinction between intentional (cf. (1)-(2)) versus non-intentional subjects (cf. (3)), which cross-cuts a second distinction, viz. one between personal pronoun (cf. (1)-(3)) versus non-personal pronoun subject. Examples with no subject (cf. (4)) form a fifth type.¹ With regard to the first distinction, the question can be raised why the author did not resort to the typologically pervasive distinction between animate versus inanimate instead,² and with regard to the second, one may wonder why it was included, as the author does not point out its possible significance at the outset, nor does it turn out

¹ In these cases, it would have been informative to get an idea of which types of subject are implied (intentional vs. non-intentional), and whether these findings correspond to those on overt subjects.

² The argument that the animate-inanimate distinction runs into problems in the case of collective noun subjects (e.g. *the government*, *the Japanese tax office*, p. 42) is a weak one, as her alternative proposal also relies on metonymic interpretations of these cases. In my view, the animate-inanimate distinction is fairly theory-neutral, and less idiosyncratic than the one between intentional and non-intentional subjects.

to be relevant to the proposed classification of adjectives in the end.^{3,4} Mindt uses the statistical procedure of hierarchical cluster analysis to arrive at this new classification, which distinguishes between adjectives co-occurring with intentional subjects (e.g. *angry*, *glad*) and those typically co-occurring with non-intentional subjects (e.g. *important*, *obvious*). Two adjectives (*sad*, *certain*) are found to belong to both classes. Mindt notes that these classes have distinct “lexical” (or perhaps more accurately ‘semantic’, as I see it) characteristics, as the first conveys experiences, and the second judgements or evaluations (pp. 58-59). She also points to effects of coercion (although she does not use this term, but speaks of “lexical interdependence”, p. 214); when adjectives of the evaluative class co-occur with intentional subjects, as in (5) below, they are argued to convey experiential meaning.

- (5) He is so *good* that I’ve ended up basing all my choreography around him. (HRF 1704, p. 63)

Although Mindt rightly invokes coercion effects within the explanative type (pp. 61-62), it does not make much sense for resultative constructions like (5) (pp. 63-64). I do not see how *good* has experiential meaning here. This brings me to what I see as the main shortcoming of this chapter, which lies in its semantic-functional description. The labels of ‘experiential’ versus ‘evaluative’ adjectives are not defined relative to the *that*-clause that follows them, and are argued to be equally valid for the resultative and the explanative construction, while the *that*-clauses in these types differ fundamentally in function (adverbial modifier versus complement). This approach, for instance, leads Mindt to group the adjective *strong* with the evaluative adjectives (p. 60), while it only occurs in resultative constructions (p. 55), and is thus never used to convey the speaker’s stance on the propositional content coded by the *that*-clause (which is how I conceive of the function of ‘evaluative’ adjectives, in keeping with traditional thinking). In addition, in the description of the explanative type, it is unfortunate that Mindt does not enable the reader to discover how her analysis challenges the traditional classification of adjectives. Her analysis largely confirms this classification (pp. 65-66) – as she herself acknowledges (p. 214) – but she forbears to present examples which the reference grammars cannot account for, e.g. those of intentional subjects with *good* (p. 54). At the same time, however, Mindt’s discussion of the explanative type also includes some attractive ideas, especially on extraposition. Her analysis clearly points to the inadequacy of the traditional approach to extraposition, which sees examples like (3) as derived from constructions with a *that*-clause in canonical subject position. She convincingly argues that the constructions with impersonal *it* are the unmarked variants (cf. Kaltenböck 2000, whom she does not cite).⁵ She concludes by assigning the same syntactic description to explanative constructions with intentional and non-intentional subjects, which I find very

³ The distinction is only relevant to the comparison of the subject types in the matrix and the *that*-clause: in the matrix clause, non-intentional subjects are realized by personal pronouns in an overwhelming 97% of the cases (predominantly by *it*), while in the *that*-clause only 14% of the subjects are pronominal (p. 47).

⁴ In this respect, it can be questioned what the added value is of the long description of the hierarchical cluster analysis including all five subject types as variables, which arrives at nine clusters of adjectives rather than the two classes eventually proposed (pp. 51-58).

⁵ Unfortunately, no details are given about how the data for the far less frequent preposed *that*-clause constructions were retrieved.

appealing since their structural similarity – in my view – also corresponds to a functional similarity, as both matrix types (e.g. *I am surprised that ...* vs *It is surprising that ...*) express the (reported) speaker's stance on the propositional content coded by the *that*-complement (cf. different matrix types combining with *no doubt that*, see Davidse et al. to appear).

Chapter 4 is concerned with the verbs occurring in the matrix clause of the strings studied. As can be expected, the copular verb BE is the most frequent one. Second comes the verb MAKE, and it is especially constructions with this verb that the chapter focuses on. Mindt's analysis indicates that this verb co-occurs almost exclusively with three adjectives: *certain*, *clear* and *sure*. Reference grammars of English have often considered MAKE *certain/clear/sure* as variants of the object extraposition construction MAKE *it certain/clear/sure*, but have also pointed to the idiomatic nature of the former combinations (e.g. these are referred to as 'verbal idioms' in Huddleston and Pullum (2002: 289, 978) and as 'collocations' in Quirk et al. (1985: 1168, 1198)). For each adjective, Mindt compares patterns (a) and (b), extending her dataset to include also strings without a *that*-clause following the adjective, and allowing for up to three words intervening between MAKE and the adjective (pp. 89-90):

- (a) MAKE + adjective (+ *that*-clause)
- (b) MAKE + direct object (DO) + adjective (+ *that*-clause).

The analysis of these patterns is based on quantitative, syntactic and semantic criteria. Again, I think that the semantic description is not quite spot on. One criterion according to which the two patterns have been analysed relates to the subject/object types (intentional versus non-intentional) co-occurring with the adjectives. For pattern (a) Mindt takes the subject type into consideration, while for pattern (b) she analyses the object type. She thus compares entirely different categories, ignoring the circumstance that pattern (a) also features direct objects that can be analysed, for example *that*-clause complements, which are intrinsically non-intentional. In fact, both MAKE *sure* and MAKE *certain* occur in the majority of cases with a *that*-clause complement (p. 92, p. 98). The other semantic criterion used concerns the meaning of the adjective in combination with the particular subject or object type. Here Mindt makes a convincing case for a different meaning of MAKE *sure* and MAKE *certain* in comparison to their pattern (b) counterparts, but within the (b) pattern, her mechanistic pairing of intentional subject/object types with experiential meaning of the adjective is far from compelling (e.g. example (62) on p. 94). Another weakness relates to the description of the voice distinctions of the MAKE verb forms. Mindt classifies passive constructions like *it was made clear that ...* with the (a) pattern 'without direct object', while passives do not have direct objects in principle and in fact form construal counterparts of the (b) pattern. Nevertheless Mindt's analysis points to a clear distinction between MAKE *sure* and MAKE *certain* on the one hand, and MAKE *clear* on the other, in that the former can best be considered as fixed verb-adjective combinations that have very different characteristics from their pattern (b) counterparts, while the two patterns with *clear* are far less different and can indeed be regarded as variants.

Chapter 5 focuses on instances of the ‘adjective + *that*-clause’ pattern that contain a direct object, like *us* in (6), and sets out to verify whether co-occurrence patterns in terms of the objects in relation to the adjectives exist.

- (6) Recent work makes us much less *confident* that any such clear correlation is possible. (A6S 1278, p. 105)

Mindt argues that so far no research has been conducted that seeks to establish a connection between the adjectives in the pattern studied and preceding objects. As I see it, this lack of research is not that surprising, nor is Mindt’s finding: a relation exists between adjectives and objects, and not between adjectives and subjects (with the exception of the verb *STRIKE*). Moreover, the hierarchical cluster analysis arrives at the same two classes of adjectives as those found in Chapter 3 (experiential vs. evaluative adjectives). Unfortunately, Mindt does not try to explain why she finds what she finds. She does not refer to the function the adjectives have in the constructions studied, viz. that of predicative complement (PC), and does not interpret her findings in terms of types of verbs taking PCs. In fact, the list of the twenty most frequent verbs occurring in the ‘adjective + *that*-clause’ string in the BNC (Table 1 of Chapter 4, p. 82) only includes verbs that take PCs (see Huddleston and Pullum 2002: 264-265 for a useful classification of verbs taking PCs). Is it any wonder that the same co-occurrence patterns obtain between subjects of complex-intransitives (e.g. *look, appear, become*) and their PCs on the one hand, and objects of complex-transitives (e.g. *make, think, find*) and their PCs on the other? I think that especially this chapter would have benefited from a less strictly linear view on and approach towards the string studied.

Chapter 6 concentrates on adverbs preceding the adjective in the ‘adjective + *that*-clause’ string. Mindt draws a distinction between adverbs that modify the following adjective (e.g. *not, so, quite*) and those that do not (e.g. *also, now, therefore*); the latter instead function at clause level. The remainder of the chapter is concerned with the former class only, and takes a closer look at the distinction between the explanative construction and the resultative one (see (1) versus (2) above), the latter of which invariably features an adverb, most frequently *so* (cf. (2)). Three aspects are compared across the two constructions, viz. types of adverb, types of adjective, and co-occurrence patterns between the subject/object types in the matrix clause and the adjectives. Mindt observes that the same adverbs found in the resultative construction are also recorded for the explanative one. As for the adjectives, she finds that neither class of adjectives (experiential vs. evaluative) is restricted to one construction only. Nevertheless, *strong* is reported to be restricted to the resultative construction, and eight other adjectives are found in the explanative type only. While these eight adjectives can readily be used to construe resultative constructions (e.g. *The situation looked so hopeful that I was inspired to take some more initiative* (WB)⁶), *strong* will never appear in the explanative construction (unless it comes to predicate a quality of State-of-Affairs rather than of entities), and one can easily think of a list of other adjectives that pattern just like *strong* (e.g. *The ablution pool was so large that a barge could sail across it* (WB); **it is large that ...*; **I am large that ...*). It seems likely that the set-up of Mindt’s study (restricted to the 51 most frequent adjectives followed by a *that*-clause) reduced problematic cases to

⁶ Examples taken from the WordBanks Online Corpus are marked with (WB).

just one instance, *strong*, while in fact this instance represents a semantically unrestricted set of adjectives (e.g. *large, small, old, ripe, red, shaky*). As regards co-occurrence patterns, no difference is detected between subject/object types and class of adjectives across the two construction types. Mindt notes that impersonal *it* is restricted to the explanative type, but she nevertheless concludes that the difference between the explanative and resultative construction can only be explained by the function of the *that*-clause. This leads her to posit a new classification, in which the ‘Adjective + explanative *that*-clause’ and the ‘Adverb + Adjective + resultative *that*-clause’ are categorized as two subtypes of a larger ‘Adjective + *that*-clause’ pattern (pp. 145-147). Although I can see how Mindt arrives at this categorization on the basis of her data and her analysis, I am inclined to attach more importance to the difference in functional value of the *that*-clause and the relation it bears (in the case of the ‘explanative’ type) or does not bear (in the case of the resultative type) to the adjective in the matrix clause, which entails a difference in selection restrictions on the adjective that reaches much further than suggested by Mindt’s dataset. In other words, I would opt for a categorization in terms of two distinct construction types (categorization 2 in Figure 1, p. 147), rather than for the one proposed by Mindt.

Chapter 7 is concerned with the retention or absence of the conjunction *that* in the ‘adjective + *that*-clause’ string, and seeks to find out which factors determine this variation between *that* and zero *that*. Mindt investigates a set of six criteria that have proven relevant in earlier studies on (typically verbal) complementation. With regard to the criterion of type of adjective preceding *that* or zero *that*, the data show the very general tendency that evaluative adjectives are found more frequently with *that*, while experiential adjectives occur more frequently with zero *that*. Analysis of the type of medium shows that the written medium clearly prefers *that* retention (78.2%), while the spoken medium features *that* retention far less (51.3%). However, a fine-grained hierarchical cluster analysis of the various genres included in the written and spoken media indicates that it is more useful to distinguish between formal and informal genres than between written and spoken texts. Mindt notes a correlation with the first criterion, in that the informal, spontaneous genres – which show the highest rate of *that*-omission – use more experiential adjectives, whereas the formal, carefully planned and prepared genres – which show the highest rate of *that*-retention – use more evaluative adjectives. Investigating the criterion of the subject type in the matrix clause, Mindt finds that non-intentional subjects (e.g. impersonal *it*) occur in about 95% of the cases with *that*. Although intentional subjects have the highest relative frequency of zero *that* (44.1%), they nevertheless occur with *that* in most cases, apart from first and second person subjects, which occur more often with zero *that* than with *that* (58.4% vs. 41.6%). Concentrating on the subject type in the *that*-clause, Mindt observes that non-pronominal subjects occur with *that* most frequently, in about 91% of the cases. Least frequent with *that* are pronominal subjects (49.5%). Furthermore, the criterion of co-reference of the subject in the matrix clause with the subject in the *that*-clause is found to hardly bear on *that*-retention versus omission. The final criterion, that of intervening elements between the adjective and the subject in the *that*-clause, by contrast, proves to be a strong determinant of the variation studied. Cases with intervening elements show a striking tendency for *that*-retention (99%); however, these cases account for 8% of the data only. With respect to the final criterion, it would have been interesting to interpret these

findings in terms of Rohdenburg's (1995, 1996) work on the Cognitive Complexity Principle, which he invokes to account for the variation between *that*- and *to*-clause complements. More generally, it would be very enlightening to subject Mindt's data to a logistic regression analysis, in order to see what the impact is of the six criteria, or 'predictors', on the retention or omission of *that* (the 'response variable') individually, and how they interact.

Chapter 8 focuses on the verb phrase (VP) in the *that*-clause, and aims to investigate whether a relation can be established between the (semantics of the) adjectives and this VP in the 'adjective + *that*-clause' pattern studied. While several authors have indicated that such relations do exist (e.g. Quirk et al. 1985: 1222ff), Mindt's main conclusion here is that there is no linguistic connection. No single adjective proves to be exclusively connected with any particular VP; nor is any type or structure of VP⁷ found to be linked to a specific adjective. Moreover, the two classes of adjectives distinguished earlier, viz. experiential and evaluative adjectives, are distributed almost evenly across VPs in the indicative, those containing a modal verb, and those in the subjunctive. In my view, however, the data reveal certain tendencies which basically support what has been found in the previous literature. One reason why these do not emerge from Mindt's discussion is that the VPs containing *should* have not been analysed in further detail. That is, 'mandative' and 'attitudinal' *should* (cf. Huddleston and Pullum 2002: 1001-1002) are thrown in the same bag, although their distribution in *that*-clauses is semantically conditioned (cf. Van linden 2012: 71-75; 153). In addition, Mindt does not categorize the modal auxiliaries (other than *should*) or so-called 'catenative verbs' into the three semantic categories traditionally assumed, viz. dynamic, deontic and epistemic modality. She thus fails to capture straightforward generalizations, for instance that the examples provided with the adjective *unlikely* (ex. (37)-(39), p. 195) all feature an epistemic modal in the *that*-clause. Finally, an issue that Mindt leaves unaddressed is whether the type of VP has an effect on the semantics of the adjective. Van linden and Davidse (2009), for example, have shown such coercion effects to be at work in a semantically restricted set of adjectives (e.g. *appropriate*, *important*).

Chapter 9 concludes the monograph and presents a brief synopsis of Mindt's most important findings. Her corpus-driven account of all cases where an adjective is followed by a *that*-clause in the BNC arrives at two formal patterns, (i) 'adjective + *that*-clause' and (ii) 'verb MAKE + adjective *certain*, *clear*, *sure*', which constitute multi-word verbs. The first pattern in turn includes two distinct constructions, the explanative and the resultative one (see above), in which two classes of adjectives are found alike, viz. experiential adjectives, associated with intentional subjects(/objects) in the matrix, and evaluative adjectives, associated with non-intentional subjects(/objects) in the matrix.

Mindt's book is a well-focused and well-structured account of a corpus-driven study on adjectives followed by a *that*-clause. It is based on an extensive dataset and shows true methodological rigour. In the process, however, various opportunities to achieve greater descriptive and explanatory depth have been missed. In several places above I have pointed to less than satisfactory treatment of the semantic or functional

⁷ Mindt draws 15 different linear VP structures from her data, distinguishing between five types of components (main verbs, modal verbs, catenative verbs, auxiliaries and operator DO, cf. Mindt, D. 2000: 90ff). These structures do not appear to be relevant to the question studied, so it is not clear why they were included at all.

properties of the patterns discussed, and I have indicated where the discussion could have benefited from adding motivation for the findings. I also think that her account is less radically different from the traditional analysis of adjectival complementation than she would like it to be. In this respect, she fails to note, for example, that the verb phrase tendencies of the adjectives, classified in terms of Quirk et al.'s (1985) semantic classes (Table 16, p. 204), actually support her claim that constructions like (1) and (3) above make up the same construction, viz. the explanative one, in which – in my terms – the matrix clause expresses the (reported) speaker's attitudinal stance on the propositional content coded by the *that*-complement clause. Table 16 (p. 204), in which the adjectives are grouped in terms of the type of attitudinal assessment they express, generalizing over experiential and evaluative adjectives, accommodates the differences in VPs across all adjectives far better than Figure 2 (p. 202), in which the adjectives are grouped in terms of the experiential and evaluative classes, generalizing over the type of attitudinal assessment they express. Table 16 thus backs up Mindt's unified analysis of the explanative construction, which – in addition to the study's descriptive wealth – I see as her most important contribution to the field of adjectival complementation, and the semantic domain of evaluation.

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